REMARKS

This application has been carefully reviewed in light of the Office Action dated September 24, 2003. Claims 37 and 41 have been amended. Claims 37 and 39-45 are pending. Reconsideration of the above-referenced application in light of the amendments and following remarks is requested.

Claims 37 and 39-45 stand rejected under 35 U.S.C. § 102 (e) as allegedly being anticipated by Hanagasaki. Reconsideration is respectfully requested.

The Office Action contends that "Applicants [sic] argue that Hanagasaki does not teach the lower and upper electrodes are uniformly thin and continuous because the method being used to form the lower electrode in Hanagasaki is different than that in the present invention. In response, as clearly shown in Hanagasaki's Fig. 1H, the lower and upper electrodes are uniformly thin and continuous. The arguments of counsel cannot take the place of evidence in the record." (Office Action, pg. 4).

Applicant respectfully submits that "[t]he structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product." M.P.E.P. § 2113 (emphasis added).

In the present case, Applicant can only define the electrode through the process steps in which the electrode is formed. Applicant teaches that the presence of nitrous oxide modulates the growth of the metal film since "nitrous oxide is a weaker oxidizing agent than the oxygen and the combination of these two oxidizing gases modulates the growth of the platinum group metal film while reducing the carbon content in the film." (Applicant's specification, pg. 14, lines 19-29) (emphasis added). The reduction of the carbon content in the film yields the thin and continuously smooth electrode.

Accordingly, Applicant's structure is completely different from conventionally deposited platinum film structures, as taught in Hanagasaki, as a result of the particular deposition process utilized. Claims 37 and 39-45 recite structural limitations of the metal film resulting from manipulating the flow rates of oxygen and nitrous oxide, and which cannot be adequately described in any other manner. See M.P.E.P. § 2113.

Hanagasaki does not teach a capacitor comprising "a first electrode and a second electrode . . . a dielectric provided between said electrodes; and wherein at least one of said first and second electrodes comprises a uniformly thin and continuous platinum group metal having a uniform thickness of from about 50 Angstroms to about 1000 Angstroms, said platinum group metal deposited in gaseous form onto a substrate in a CVD deposition chamber with a flow rate of from about 50 to about 500 sccm in the presence of an oxygen and nitrous oxide mixture, wherein said mixture has a combined flow rate in the range of from about 1500 sccm to about 2500 sccm," as recited in claim 37.

Similarly, Hanagasaki does not teach a capacitor comprising, "a first electrode and a second electrode . . . a dielectric provided between said electrodes; and wherein at least one of said first and second electrodes comprises a uniformly thin and continuous platinum group metal having a uniform thickness of from about 500 Angstroms to about 700 Angstroms, said platinum group metal formed by depositing platinum in a CVD deposition chamber with a flow rate from about 50 to about 500 sccm in the presence of an oxygen and nitrous oxide mixture at a predetermined temperature and at a pressure of from about 10 to about 1000 Torr," as recited in claim 41.

Moreover, Applicant's FIG. 2 illustrates a metal film formed in accordance with the invention (in the presence of oxygen and nitrous oxide); whereas, Applicant's FIG. 3 illustrates a metal film formed by conventional methods such as taught in Hanagasaki. As illustrated, the metal film of FIG. 3 is not smooth and continuous compared with the metal film in FIG. 2. Instead, it is rough and not continuous. As a result of depositing a

metal film in the presence of both oxygen and nitrous oxide, Applicant's structure is different.

Hanagasaki teaches a conventional method of depositing platinum films 9 and 11, and thus, Hanagasaki merely discloses a conventional structure. Hanagasaki teaches, "[a]s shown in FIG. 1F, successively laminated on the planarized substrate surface are a Pt film 9 by sputtering, a PZT film 10 by a sol-gel method, and a Pt film 11 by sputtering." (Col. 7, lines 48-50) (emphasis added). Applicant's invention addresses the shortcomings of Hanagasaki's structure.

In the 'Discussion of Related Art' in Applicant's specification, Applicant discloses that "the conventional methods of depositing platinum films suffer drawbacks . . . [and] are unable to consistently create a continuous uniformly thin platinum film that additionally has good step coverage . . . [t]hese conventional prior methods include . . . sputtering methods." (Applicant's specification, pg. 2, lines 5-11) (emphasis added). Accordingly, Hanagasaki does not teach Applicant's structure since Hanagasaki teaches a conventional way of depositing a platinum film which yields a conventional structure.

The Office Action asserts that "as sown [sic] in Hanagasaki's Fig. 1H, the lower and upper electrodes are uniformly thin and continuous." (Office Action, pg. 2). There is no support for this assertion. Hanagasaki teaches a conventional method of depositing platinum films 9 and 11 and thus, a conventional structure.

Claims 37 and 39-45 recite limitations which distinctly claim the product for which protection is sought: a capacitor with a smooth and continuous platinum electrode comprising a platinum group metal formed as a result of a particular deposition process, "in the presence of both oxygen and nitrous oxide" and under predetermined specific temperature, pressure and combined flow rate ranges. Claims 37 and 39-45 recite structural limitations (which are clearly illustrated in FIG. 2) resulting from particular deposition parameters, and which cannot be adequately described in any other manner.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Dated: December 19, 2003

Respectfully submitted,

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